

REMARKS

INTRODUCTION:

In accordance with the foregoing, claim 40 has been added. Claims 1-40 are pending and under consideration.

CLAIM REJECTIONS:

1. Rejection of Claims 1, 2, 4-11, 13-15, 18-21, 23, 25, 27-35 and 39 (Yamamoto and Heyman et al.)

As previously noted, claim 1 recites "a compensating unit . . . being formed of a material having a lower thermal expansion coefficient than that of the first and second resilient support members." Thus, tension in the mask is not reduced during an annealing process due to a difference in thermal expansion between the mask and the resilient support members. Present Specification, page 11. As previously argued, Yamamoto does not teach this feature, and the combination thereof with Heyman is not proper.

Response to Advisory Action

In the Advisory Action, the Examiner agrees with the Applicant's previous argument that Yamamoto does not teach the compensating unit having the lower thermal expansion coefficient. However, the Examiner disagrees with the previous argument that Yamamoto would not benefit from different expansion coefficients, and would not provide Yamamoto's desired goal of restoring tension after the blackening.

In the Advisory Action, the Examiner states that the motivation would have been to eliminate the step of restoring the tension in Yamamoto by eliminating the loss of tension during the blackening process. However, Heyman makes no discussion of loss of tension during blackening. Instead, this reference teaches that a problem in the prior art is that the support frame and the mask must have a low thermal coefficient of expansion, thereby requiring expensive materials. Heyman, col. 1, ln. 39-43. Thus, there is no teaching in this reference that the lower and upper portions 44, 46 having different thermal coefficients can be used to eliminate the step of restoring tension.

It is noted that "rejection of patent application for obviousness under 35 USC §103 must

be based on evidence comprehended by language of that section, and search for and analysis of prior art includes evidence relevant to finding of whether there is teaching, motivation, or suggestion to select and combine references relied on as evidence of obviousness; factual inquiry whether to combine references must be thorough and searching, based on objective evidence of record." In re Lee 61 USPQ2d 1430 (CA FC 2002) Thus, as pointed out in In re Lee, the record must support motivation, i.e., there must be something in the record pointing out where the recited motivation can be found. In addition, there must be some discussion on how that purported motivation or suggestion is even relevant to the reference being modified. However, as discussed above, the recited motivation cannot be found in Heyman.

Claim 2 depends from independent claim 1 and recites that the compensating unit comprises a pair of flat bars having ends fixed to supports of the resilient support members. According to the Examiner, this is a matter of design choice that does not achieve any of the stated problems. Applicants respectfully disagree.

Page 11 of the present specification states that the compensating unit is provided in order to prevent tension in the mask 110 from decreasing due to plastic deformation of the mask 110 caused by a difference in thermal expansion between the mask 110 and the resilient members 123 and 124. Again, it is noted that the stated goal is to prevent the decreased tension, not to compensate for the decreased tension after it has occurred. Contrary to the Examiner's assertion, this goal is achieved by the flat bars.

In contrast, Yamamoto recovers tension that is already lost by using bolts and screws, inserted after the blackening. The claimed flat bars could not be inserted into Yamamoto after the blackening process due to physical limitations imposed by the frame members 3a, 3b of this reference. Thus, the use of the claimed flat bar in Yamamoto is more than mere design choice. Instead, the present arrangement and Yamamoto have entirely different timings with respect to coping with the lost tension, which accounts for the different structures.

Other dependent claims recite features of the compensating unit that are also not taught in the cited references. For example, claim 6 recites first and second brackets. Claims 4, 5, 9 and 10 recite bars.

Claim 11 depends from claim 1 and recites that a thermal coefficient of the mask is greater than that of the compensating unit and equal to or greater than that of the first and second resilient support members.

The Examiner relies upon column 3, line 29 to column 4, line 4 of Heyman et al. as teaching these features. This portion states that the upper portions 44 and the lower portions 46 have different thermal coefficients of expansion. Heyman et al., col. 3, ln. 29-34. However, these features of Heyman et al. do not pertain to the thermal coefficient of the mask.

Heyman et al. further states that the tension mask 24 and the intermediary members 48 are made of a material "that has a relatively low coefficient of thermal expansion." Heyman et al., col. 4, ln. 1-4. Thus, this portion teaches that the mask has a low coefficient of expansion, whereas claim 11 recites that the mask has a thermal coefficient which is greater.

Independent claims 13, 23 and 39 are patentable over Yamamoto and Heyman et al. at least for similar reasons as discussed with respect to claim 1.

Accordingly, withdrawal of the rejection is requested.

2. Rejection of Claims 3, 16-17, 24 and 36-38 (Yamamoto, Heyman et al. and Ichigaya et al.)

It is respectfully submitted that Ichigaya et al. does not overcome the above deficiencies in Yamamoto and Heyman et al., and is not relied upon by the Examiner for this purpose.

3. Rejection of Claims 12, 22 and 26 (Yamamoto, Heyman et al. and Kim et al.)

It is respectfully submitted that Kim et al. does not overcome the above deficiencies in Yamamoto and Heyman et al., and is not relied upon by the Examiner for this purpose.

NEW CLAIM 40

New claim 40 is added and recites that the compensating unit maintains the tension during an annealing process of the mask. As discussed above, the cited references do not teach or suggest this feature.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

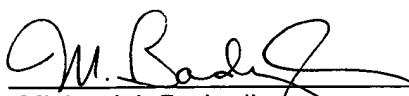
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this response, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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